

IN THE CLAIMS

Please amend the claims as listed below:

Please cancel claims 1-12 to overcome the form objections pursuant to section 112 and please add new claims 13-27 which are drawn from the elements of claims 1-12 and restated in a fashion to more clearly define the subject matter of the invention.

Complete listing of claims.

1 - 12 Canceled

13. (New) A stent for implantation in or around a hollow organ, comprising:

said stent formed as a unitary structure from a shape memory material, said unitary structure being self-expanding stent upon deployment in said organ;

said unitary structure being a tube shaped body defined by a curved planar sidewall surrounding an axial interior along a length, said sidewall having voids formed therein defining a plurality of adjacently positioned ring shaped elastic wall segments, each having a radial elastic structure, said wall segments,

said voids defining gaps separating said wall segments, a plurality of connector devices in a communication across said gaps linking adjacently positioned said wall segments, said connectors having a substantially "S" shape at a central portion of said communication;

said connector devices aligning along a length of said body to form at least one continuous longitudinal flange;

said flange providing means to maintain said length of said stent under tensile or compressive stress; and

said S shape of said connectors providing means for absorbing a compressive stress in the axial direction or a tensile stress in the longitudinal direction.

14.(New) A stent according to Claim 13, characterized by the fact that the wall segments have first spring devices and second spring devices arranged in alternate fashion at an angle to each other.

15.(New) A stent according to Claim 14, characterized by the fact that the first spring devices and second spring devices are more or less rectilinear.

16.(New) A stent according to Claim 14 characterized by the fact that the connector devices communicate in-between only first spring devices or only second spring devices.

17.(New) A stent according to Claim 15 characterized by the fact that the connector devices communicated in-between only first spring devices or only second spring devices.

18.(New) A stent according to claim 13 of the previous claims, characterized by the fact that several longitudinal flanges are parallel to each other at determined distances from each other in a helical formation along said length of said sidewall.

19.(New) A stent according to claim 14 of the previous claims, characterized by the fact that several longitudinal flanges are parallel to each other at determined distances from each other in a helical formation along said length of said sidewall.

20.(New) A stent according to claim 15 of the previous claims, characterized by the fact that several longitudinal flanges are parallel to each other at determined distances from each other in a helical formation along said length of said sidewall.

21.(New) A stent according to claim 16 of the previous claims, characterized by the fact that several longitudinal flanges are parallel to each other at determined distances from each other in a helical formation along said length of said sidewall.

22.(New) A stent according to claim 14, characterized by the fact that said first spring devices and said second spring devices have a width and said connector devices have a connector width which is wider than both said first spring devices and said second spring devices.

23. (New) A stent for implantation in or around a hollow organ, comprising:

said stent formed as a unitary structure from a shape memory material, said unitary structure being expandable upon deployment in said organ;

said unitary structure being a tube shaped body defined by a sidewall surrounding an axial interior along a length, said sidewall having voids formed therein defining a plurality of adjacently positioned ring shaped elastic wall segments, each having a radial elastic structure, said wall segments,

said voids defining gaps separating said wall segments,

a plurality of connector devices in a communication across said gaps linking adjacently positioned said wall segments, said connectors having a substantially "S" shape at a central portion of said communication;

said connector devices aligning along a length of said body to form at least one continuous longitudinal flange;

said flange providing means to maintain said length of said stent under tensile or compressive stress; and

said S shape of said connectors providing means for absorbing a compressive stress in the axial direction or a tensile stress in the longitudinal direction.

24. (New) A stent according to claim 23 wherein said unitary structure is expandable upon a deployment in said organ using a balloon catheter.

25. (New) A stent according to claim 13, characterized by the fact that it is made of a shape memory material, in particular Nitinol and may be self expanded upon a deployment in said organ.

26. (New) A stent according to claim 24 characterized by the fact that it is made of stainless steel, plastic or a self-dissolving material.

27. (New) A stent according to claim 13 wherein the sidewall defining said tube shaped body is machined to a smooth polished surface.